# *Wildlife Research Projects*

## ACTIVE IN BRITISH COLUMBIA

**APRIL 1990 TO MARCH 1991**

BC Environment

June 1991

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# WILDLIFE RESEARCH PROJECTS ACTIVE IN BRITISH COLUMBIA
# APRIL 1990 to MARCH 1991

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## Introductory Remarks

This information circular lists all research projects known to be active in British Columbia in the period from April 1990 to March 1991. The purpose of this circular are: 1) to list active wildlife research projects with respect to species studied, location, status, purpose, and principal contacts, 2) to promote communications and cooperation among wildlife researchers working in the province, 3) to promote greater awareness of the number of individuals and agencies conducting research, and 4) to foster development of a B.C. Wildlife Research network.

Although this is the second attempt to catalogue research projects, it still will contain errors and omissions. Please be assured that none of these are deliberate! Each year the list will be more complete as the list of researchers expands and if you let us know of any errors, omissions, or upcoming projects.

There still is the question of what projects should be included in this list. For the present , we have erred on the side of inclusion rather than exclusion. For the most part, most listed projects are sponsored by government or are graduate theses which are characterized by those activities usually associated with research endeavors.

## User's Guide

The projects are listed into two groups. The first group, numbers 1 to 150, consists of studies listed in alphabetical order by the common name of a species, group of species, or generic name such as birds or seabirds. Studies orientated toward systems or groups of species or deal with habitats are listed in the second group numbered 151 to 178 under the broad heading of topics.

Locations are usually the nearest settlement, major geographical feature, or in a few cases, the range of a species. Status should be self-explanatory. Agency refers to those organizations principally involved with the project. Most projects receive support from many agencies and likely some names are omitted. Again, these omissions are not intentional; the choice of names is left to the researcher who submit this information. At the end of this section is a list of the organization abbreviations used in the list of projects. We tried to restrict the project descriptions to twelve words or less. Contacts are self-explanatory.

## Future Directions

We invite feedback on the value of continuing with this type of document as well as on errors and omissions. If there are any comments on changes to the format, please let us know. The response to this second edition has been excellent with an increase from 104 listings in our first publication to 178 in this one. Hopefully, the 1991/1992 listings will be initiated in October with a publication date of January, 1992.

## Acknowledgements

As with any cooperative effort, this listing depended upon contributions from many individuals. We would like to thank all 75 of those who contributed to this second circular.

## Abbreviations of Agencies

| | |
|---|---|
| BCCF | British Columbia Conservation Foundation |
| BCH | British Columbia Hydro and Power Authority |
| CFP | Canadian Forest Products |
| CPS | Canadian Parks Service |
| CWS | Canadian Wildlife Service |
| DCF | Donner Canadian Foundation |
| DU | Ducks Unlimited |
| FC | Forestry Canada |
| FCC | Fletcher Challenge Canada |
| FI | Forest Industry |
| GVWD | Greater Vancouver Water District |
| IA | Inter Agency |
| IDFG | Idaho Department of Fish and Wildlife |

## Abbreviations of Agencies (cont.)

| | |
|---|---|
| LBCS | Laskeek Bay Conservation Society |
| LBS | Lasqueti Bay Society |
| MB | MacMillan Bloedel Limited |
| MCMF | Mountain Caribou in Managed Forests |
| MDFWP | Montana Department of Fish, Wildlife, and Parks |
| MOE | Ministry of Environment |
| MOF | Ministry of Forests |
| MOP | Ministry of Parks |
| MOTH | Ministry of Transportation and Highways |
| NCC | Nature Conservancy of Canada |
| NSERC | National Science and Engineering Research Council |
| NTBC | Nature Trust of British Columbia |
| NVTC | Nicola Valley Tribal Council |
| RBCM | Royal British Columbia Museum |
| SABR | Spatsizi Association for Biological Research |
| SFU | Simon Fraser University |
| SP | Scott Paper |
| TAMU | Texas A & M University |
| TNC | The Nature Conservancy of United States |
| UA | University of Alberta |
| UBC | University of British Columbia |
| UC | University of Calgary |
| UM | University of Montana |
| USFS | United States Forest Service |
| USFWS | United States Fish and Wildlife Service |
| UVIC | University of Victoria |
| UW | University of Wyoming |
| VPA | Vancouver Public Aquarium |
| WFP | Western Forest Products |
| WHC | Wildlife Habitat Canada |
| WWF | World Wildlife Fund Canada |

# *WILDLIFE RESEARCH AND DEVELOPMENT PROJECTS ACTIVE IN BRITISH COLUMBIA IN 1990-1991*

## GROUP ONE - SPECIES ORIENTED

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 1 | Alcid Seabirds | Southern Vancouver Island | 6 of ongoing | UVIC | Underwater feeding ecology and diving behavior; develop depth gauges | Alan Burger 721-7094 |
| 2 | Amphibians, Mammals, Birds | North Vancouver Island (Woss) | 1 of 2 yrs | SFU | Evaluate changes in vertabrate communities among patches of mature forests of different sizes | Jim Schieck 721-5524 |
| 3 | Ancient Murrelet | Limestone Island, | 2 of ongoing | LBCS, CWS | Population dynamics, predation | Tony Gaston (819)997-6121 Keith Moore 559-8889 |
| 4 | Ancient Murrelets, Cassin's Auklets, other Birds | East Limestone Island, Queen Charlotte Islands | 2 of ? yrs | LBCS | Nesting habits of seabirds | Keith Moore 559-8889, Charlotte Husband 559-4582, Andrea Lawrence 539-5541 |
| 5 | Bald and Golden Eagles | Nimpkish Valley | 2 of ongoing | CFP | Map and manage nest sites, collect data on nesting success | Alan McLeod 281-2481 |
| 6 | Bald Eagle Province-wide | 5 of 5 yrs | UBC, SP, MB, WHC | | Silviculture procedures in bald eagle habitat | Fred Bunnell 822-5724, Anthea Farr 576-1402 |
| 7 | Bald Eagle | West Vancouver Island | 2 of ? yrs | FCC | Nest inventory and habitat relations | Wayne Wall 246-9332 |
| 8 | Bats | Province-wide | 2 of 2 yrs | RBCM | Handbook on B.C. bats; first volume in revised "Mammals of B.C." | David Nagorsen 387-2933, Mark Brigham (306) 585-4145 |
| 9 | Birds | Coastal B.C. beaches | 3 of 5 yrs | MOE, UVIC | Monitor incidence of dead seabirds and rates of oiling; produce baseline in oil spill impact studies | Alan Burger 479-9833 |
| 10 | Birds | Kamloops area | 2 of 3 yrs | UBC, MOF, MOE | Effects of thinning on forest bird communities | Barry Booth 822-5724 |
| 11 | Birds | McDonell Lake area, west of Smithers | 1 of 5+ yrs | MOF | Breeding bird diversity and abundance in clearcut, uncut, and new forestry sites | Jim Pojar, Allen Banner, Ken MacKenzie 847-7440 |
| 12 | Black and Grizzly Bears | Flathead Drainage, East Kootenay | 13 of ongoing | MOF,USFWS, MOE, UBC, SFU, UM | Population ecology and habitat needs in relation to resource development | Bruce McLellan 963-9651, Chris Servheen (406)329-3212, Fred Hovey 291-4512 |
| 13 | Black Bear | Flathead River Valley | 3 of 4 yrs | SFU | Interactions with grizzly bears | Fred Hovey or Alton Harestad 291-4809 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 14 | Black Oystercatcher, Glaucous-winged Gull | Skidegate Inlet, Queen Charlotte Islands | 1 of 1 yrs | CWS | Interspecific competition | Kees Vermeer 363-6537 |
| 15 | Black Tern | Creston | 4 of ? yrs | SFU | Foraging behavior of parents | Clive Welham or Ron Ydenberg 291-4475 |
| 16 | Black-tailed Deer | Caycuse River | 3 of 4 yrs | MOF, FC | Identify constraints on moving between and within habitats | Scott McNay 387-6711 |
| 17 | Black-tailed Deer | Lake Cowichan | 3 of 3 yrs | UBC, FCC | Spatial dynamics | Jeff Morgan 749-4282 |
| 18 | Black-tailed Deer | Nimpkish Valley | 2 of 3 yrs | CFP, MOF | Test the effect of ANI-PELR as a browsing deterrent | Ian McLeod 281-2481, Jeff Fournier 660-9866 |
| 19 | Black-tailed Deer | Nimpkish Valley | 4 of 4 yrs | MOF, CFP | Effect of winter habitat loss | Scott McNay 387-3144, Alan McLeod 281-2481 |
| 20 | Black-tailed Deer | Caycuse River, TFL #46 | 3 of 4 yrs | FCC | Assess use of snow line mapping to indicate winter habitat needs | Bob Willington 246-9332 |
| 21 | Black-tailed Deer | Caycuse River, TFL #46 | 3 of 4 yrs | FCC | Test GIS as tool to aid in the assessment to habitats for deer | Line Giguere 246-9332 |
| 22 | Black-tailed Deer | Vancouver Island | 2 of 2 yrs | MOF, MOE | Assess survival rates and mortality causes | Joan Voller 754-1530 |
| 23 | Black-tailed Deer | Vancouver Island | 3 of 3 yrs | UBC, MB, CFP | Managed stands in the Coastal Western Hemlock Zone for deer winter range | Laurie Kremsater 822-6624 |
| 24 | Black-tailed Deer | Vancouver Island | 3 of 4 yrs | UBC, FCC, CFP, MB, MOF | Impacts of intensive forestry on habitat and populations | Fred Bunnell 822-5724, Scott McNay 387-6711 |
| 25 | Black-tailed Deer | Vancouver Island | 4 of 4 yrs | MOE, MOF | Assess population indices as response to habitat changes | Don Doyle 758-3951 |
| 26 | Black-tailed Deer | Vancouver Island | 11 of 11 yrs | MOE, MOF | Identify seasonal habitat needs | Scott McNay 387-6711 |
| 27 | Black-tailed Deer, Roosevelt Elk | Nanaimo River area | 3 of 3 yrs | MOE, MOF | Development and validation of habitat quality models to be used in integrated wildlife- forestry planning | Marvin Eng 387-2710 |
| 28 | Black-tailed Deer, Roosevelt Elk | Nimpkish Valley | 1 of 1 yrs | MOE | Habitat assessment and planning to achieve integrated wildlife-forestry planning | Marvin Eng 387-2710 |
| 29 | Blue Grouse | Vancouver and Cortes Islands | 1 of ? yrs | TAMU | Using electrophoresis to examine relationships among North American grouse | Darell Ellsworth or Fred Zwickel 935-6478 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 30 | Bobcat | Rocky Mountain Trench | 3 of 3 yrs | MOE, UC | Effects of harvest on population dynamics | Anna Wolterson 426-1450, Trevour Kinley 429-3479 |
| 31 | Brant | Georgia Strait | 1 of 3 yrs | CWS | Population and habitat use | Neil Dawe 752-9611 |
| 32 | Burrowing Owl | South Okanagan Valley | 8 of ongoing | MOE | Evaluation of reintroduced owls; mark-recapture demography | Andrew Bryant 754-1356, Mike Sarell 642-8256 |
| 33 | Bushy-tailed Woodrat | Southern Dry Interior | 3 of 5 yrs | RBCM | General biology of extant populations; palaeo-botanical significance of old middens | David Nagorsen 387-2933, Richard Hebda 387-5493 |
| 34 | California Bighorn Sheep | Yalakom River/Fraser River, north and west of Lillooet | 3 of 4 yrs | MOE | Impacts of forest/mining roads/development on migration paths and critical habitat | Phil Holman 374-9717 |
| 35 | Caribou | East Central to Southern B.C. | 3 of 5 yrs | MOE, WHC, MOF, (MCMF) | Movements, habitat relationships, and special management techniques for winter ranges | Susan Stevenson 564-5695, Ken Child or Glen Watts 564-6425 |
| 36 | Caribou | Graham River | 4 of ongoing | MOE | Effect of forest management on habitat use and population dynamics | Rob Thomson 787-3288 |
| 37 | Caribou | Itchas and Ilgatchuz Ranges | 1 of ? yrs | MOF | Integrating habitat needs and forest management | Harold Armleder 398-4407 |
| 38 | Caribou | Itchas and Ilgatchuz Ranges, Tweedsmuir Park | 1 of 2 yrs | UBC, MOF, MOE | Successful trends of lichens following fire | Alfred Brulisauer or Michael Pitt 822-3452 |
| 39 | Caribou | North Tweedsmuir Park | 3 of 3 Yrs | MOP, MOE | Calf survival and recruitment | Jim DeHart 847-7320, Rick Marshall 847-7299 |
| 40 | Caribou | Quesnel Highlands | 2 of ? yrs | MOF | Integrating habitat needs and forest management | Harold Armleder 398-4407 |
| 41 | Caribou | Selkirk Mountains | ? of ? yrs | MOE, IDFG, USFWS | Habitat relationships and parameters and transplant success | Guy Woods 364-6341, Brad Compton or Greg Sevheen (208) 267-7783 |
| 42 | Caribou | Tumbler Ridge, Dawson Creek Forest District | 2 of 5? yrs | MOE | Effect of forest management on habitat use and population dynamics | Rob Thomson 787-3288 |
| 43 | Caribou | West Chilcotin, northwest of Alexis Creek | 3 of 5 yrs | MOE | Enhancement of terrestrial lichen for forage | Kat Enns 479-6216, Andy Stewart or Herb Langin 398-4530 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 44 | Cascade Mantled Ground Squirrel | Southern Interior | 2 of 2 yrs | UBC | Species status, range, habitat characteristics; status report for COSEWIC and BCMOE | Kim Cheng or Maria Leung 822-2480 |
| 45 | Common Barn Owl | Lower Mainland | 2 of 3 yrs | UBC | Nesting and roosting habitats; methodology for stabilizing local populations | Kim Cheng 822-2480, Lorraine Andrusiak 585-4615 |
| 46 | Cormorants | Coastal B.C. | 1 of ongoing | CWS | Impacts of toxics and population | Phil Whitehead or John Elliott 946-8546 |
| 47 | Cougar | Englishman River, Northwest Bay | 1 of 3? yrs | MOE | Population dynamics, movement behavior, general ecology | Knut Atkinson or Doug Janz 578-3951 |
| 48 | Cougar | Junction Wildlife Management Area | 3 of 3 yrs | MOE, UBC | Predation dynamics | Scott Harrison 847-7500 |
| 49 | Elk | Rocky Mountain Trench | 2 of 3 yrs | MOE | Population, distribution, and habitat use in conjunction with agriculture lands | Anna Wolterson 426-1450 |
| 50 | Fallow Deer | Sidney Island, Sidney Spit Marine Park | 3 of 3 yrs | MOP | Population status and impact on vegetation | Rik Simmons 387-3931 |
| 51 | Fisher | Williams Lake | 2 of 3 yrs | MOE | Population dynamics and habitat selection | Randy Wright 398-4565 |
| 52 | Flammulated Owl | Kamloops area | 3 of 3 yrs | UBC, WWF, MOE, MOF, FI | Timber harvest prescriptions compatible with flammulated owl | Astrid Van Woudenberg 822-5724 |
| 53 | Forest Birds | Kootenay National Park | 2 of 2 yrs | SFU | Dynamics and seral stage | Danny Catt or Alton Harestad 291-4512 |
| 54 | Furbearers | Peace River Site C dam area | 1 of 2 yrs | BCH | Relative abundance and occurrence by bio-physical habitat units | Keith Simpson 531-2894, Rod Backmeyer 787-0588, Glen Singleton 663-1809 |
| 55 | Grassland Birds | Riske Creek, Becher's Prairie | 2 of 3 yrs | UBC, CWS, MOE, MOF, BCCF | Managing grasslands for avifauna diversity, with emphasis on long-billed curlews | Tracy Hooper 327-4113, Michael Pitt 822-3452, Jean-Pierre Savard 946-8546 |
| 56 | Great Blue Heron | Lower Fraser Valley, Gulf Islands | 4 of 4 yrs | CWS | Population dynamics | Rob Butler 946-8546 |
| 57 | Great Blue Heron, Cormorants, Pigeons | Strait of Georgia, Fraser River estuary | Ongoing | UBC, CWS | Effects of dioxin contamination on wildlife species; determine "safe" levels of environmental TCDD and related chemicals | Kin Cheng 228-4593, L. Hart 822-4484, G. Bellward 822-4103, D. Henshel 822-4453, Phil Whitehead or John Elliot 946-8546 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 58 | Grizzly Bear | Khutzeymateen River Valley | 2 of 4 yrs | MOE, MOF | Impact of potential forest development on bears and their habitat | Tony Hamilton or Grant MacHutchon 387-9761 |
| 59 | Grizzly Bear | Kimsquit River Valley and other Coastal Watersheds | 8 of 9 yrs | MOE, MOF, WHC | Impacts of forest development on habitat | Tony Hamilton 387-9761 |
| 60 | Grizzly Bear | Nelson, Kootenay Lake Forest District | 3 of 4 yrs | UBC, MOE, MOF, FI | Integrated grizzly bear and forest management | Rob Wielgus 822-5724 |
| 61 | Grizzly Bear | South Tweedsmuir Park | 2 of 3 yrs | MOP, MOE | Movements, seasonal habitat ranges, population dynamics | Glen Davidson 398-4414, Tom Smith 398-4561 |
| 62 | Gulls, Cormorants, Oystercatcher | West Coast, Vancouver Island | 2 of 3 yrs | CWS | Interspecific competition and population dynamics | Kees Vermeer 356-6537 |
| 63 | Intertidal Crabs, Amphipods | Bamfield, Vancouver Island | 1 of 1 yrs | MOE, UVIC | Assessment and comparison of the toxicity of Bunker C crude oil | Debbi Hlady 387-9658 |
| 64 | Introduced Amphibians and Reptiles | Southern Vancouver Island, Gulf Islands, and Lower Mainland | 1 of 4 years | RBCM | Species survey and population status | Stan Orchard 387-2940 |
| 65 | Killer Whales | Bella Coola | 2 of ? | VPA, NSERC | Use of sonar in feeding | L. Barrett-Lennard 822-3363, J. Ford 685-3364 |
| 66 | Killer Whales | Robson Bight Ecological Reserve | Ongoing | MOP | Interaction of whales with humans and | Rik Simmons 248-3931 |
| 67 | Killer Whales | South Coast | Ongoing | SFU | Foraging behavior of transients | Robin Baird or Larry Dill 291-3664 |
| 68 | Long-billed Curlew | Cariboo-Chilcotin | 1 of 3 yrs | CWS | Population and habitat use | Jean-Pierre Savard 946-8546 |
| 69 | Marbled Murrelet | Coastal B.C. | 2 of ongoing | CWS | Distribution and forest and marine habitat use | Gary Kaiser 946-8546 |
| 70 | Marbled Murrelet | Southern Vancouver Island | 2 of 3-5 yrs | UVIC, CPS | Forest nesting habitat and links between terrestrial and marine habitats | Alan Burger 721-7094 |
| 71 | Marbled Murrelet | Vancouver Island | 1 of 1 yrs | CWS | Distribution and abundance | Moira Lemon 946-8546 |
| 72 | Marbled Murrelet | West Coast | 2 of ? yrs | IA, FCC | Nest inventory and habitat relations | Dave Lindsay 246-9332 |
| 73 | Marten | Emerson Creek near Houston | 4 of 5 yrs | MOE, SFU, MOF | Habitat relationships in subboreal forests, develop habitat management tools | Eric Lofroth 847-7692, Alton Harestad 291-4809, Don Eastman 387-9796 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 74 | Marten | Coastal B.C. and Alaska | 6 of 7 yrs | RBCM | Food habits, biogeography, and morphometrics using fur harvest carcasses | David Nagorsen 387-2933 |
| 75 | Meadow Vole | Creston | Ongoing | SFU | Effects of predation risk and density on reproduction | Mlke Dehn or Larry Dill 291-3664 |
| 76 | Mergansers | Simon Fraser University | Final year | SFU | Risk of predation on fish | Guy Martel or Larry Dill 291-3664 |
| 77 | Moose | Coquihalla-Okanagan Connector | 5 of 5 yrs | MOE, MOTH | Impact of highways on movement patterns and population dynamics | Keith Simpson 531-2894, Les Gyug 769-5907, Angela Buckingham 387-7766 |
| 78 | Moose | Kamloops, Pentiction Forest District | 2 of 3 yrs | UBC, FI | Analysis and quantification of thermal cover during summer | Mike Demarchi 822-5724 |
| 79 | Moose | Thompson-Nicola Subregion | 6 of ongoing | MOE | Pregnancy rates, conception dates, fecundity | Doug Jury 374-9717 |
| 80 | Moose | Thompson-Nicola, Cariboo, and Omineca areas | ongoing | MOE, UBC | Evaluation of selective moose harvesting strategies | Rob Thomson 787-3288, Fred Bunnell 228-5724 |
| 81 | Mountain Goat | Garibaldi Park | Ongoing | MOP | Population status | Judy Millar 929-1292 |
| 81 | Mule Deer | Cariboo Forest Region | 10 of 10 yrs | MOF | Integrating winter range habitat needs and forest management | Harold Armleder 398-4407 |
| 83 | Mule Deer | Coquihalla-Okanagan Connector | 5 of 5 yrs | MO MOTH | Impact of highways on movement patterns and population dynamics | Keith Simpson 531-2894, Les Gyug 769-5907, Angela Buckingham 387-7766 |
| 84 | Mule Deer | Thompson-Nicola Subregion | 1 of 4 yrs | MOE | Seasonal ranges, migration patterns, sightability correction factors, population estimates and distribution | Kurt Kier 374-9717 |
| 85 | Mule Deer, Moose, Elk, White-tailed Deer | Peace River Site C dam area | 1 of 2 yrs | BCH | Impact of dam on population dynamics and habitat loss | Keith Simpson 531-2894, Rod Backmeyer 787-0588, Glen Singleton 663-1809 |
| 86 | Mule Deer, Rocky Mountain Bighorn Sheep | Arrow Lakes Basin, West Kootenays | 4 of ongoing | MOE | Movements, seasonal habitat ranges, population dynamics, and predation | Don Miller 354-6163 |
| 87 | Northwest Chipmunk, Deer Mouse, Red-backed Vole, other Small Mammals | Prince George | 4 of 5 yrs | UBC | Effects of herbicide use in Sub Boreal Spruce Zone on small mammal populations | Tom Sullivan 822-3543 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 88 | Northwest Chipmunk, Deer Mouse, Red-backed Vole, other Small Mammals | Williams Lake | 1 of 3 yrs | UBC | Influence of silvicultrue systems on seed predation and small mammal diversity | Thomas Friese or Tom Sullivan 822-3543 |
| 89 | Northwestern Crow | Mitlenatch Island | ongoing | SFU | Ecology | Nico Verbeek 291-4458 |
| 90 | Orange-crowned Warbler, McGillivary's Warbler | Kelsey Bay | 1 of 1 yrs | CWS | Vegetation forage and nesting capability in herbicide treated and non-treated stands | Kat Enns 479-6216, Rhonda Millikin 946-8546 |
| 91 | Osprey | Kootenay | 3 of ? yrs | SFU | Juvenile learning | Marlene Machmer or Ron Ydenberg 291-4475 |
| 92 | Osprey | Nelson | 1 of 2 yrs | SFU | Male foraging energetics | David Green 291-3998, Ron Ydenberg 291-4475 |
| 93 | Porcupine | Kitsumkalum Valley near Terrace | 2 of ? yrs | MOF, UBC | Population dynamics and tree damage in managed and unmanaged stands | J. Krebs, Andrea Lawson, or Tom Sullivan 822-3543 |
| 94 | Ptarmigan | Chilkat Pass | ongoing | UA | Population ecology | Sue Hanon, U. of Alberta |
| 95 | Raccoon | Louise Island, Queen Charlotte Islands | 2 of 4 yrs | MOE, UVIC, CWS, CPS | Impact of raccoons on colonies of burrow-nesting seabirds | Lisa Hartman or Don Eastman 387-9796, Al Edie 847-7298 |
| 96 | Red Squirrel, Northwestern Chipmunk, Deer Mouse, Red-backed Vole, other Small Mammals | Penticton Creek, Lac le Jeune, Prince George | 3 of 3 yrs | UBC | Effects of stand density on small mammal populations and squirrel damage | Tom Sullivan 822-3543 |
| 97 | Red Squirrel, Northwestern Chipmunk, Deer Mouse, Red-backed Vole, other Small Mammals | Vernon | 3 of 5 yrs | UBC | Effects of large scale food supplementation on small mammal populations and squirrel damage | Tom Sullivan 822-3543 |
| 98 | Red-napped Sapsucker, Hairy Woodpecker, Northern Flicker | Hat Creek | 2 of 5 yrs | RCBM, UVIC | Estimation of survivorship, reproductive rate, and site/mate fidelity; description of social system and space use/defence | Ted Miller 387-2107 |
| 99 | Rocky Mountain Bighorn Sheep | Galton Ranges, Grassmere | 1 of 2 yrs | MDFWP, MOE | Population dynamics and habitat use | Jun Cross (406) 752-5501, Anna Wolterson 426-1450, |
| 100 | Roosevelt Elk | Nahmint River Valley | 3 of 3 yrs | MOE | Testing models of elk seasonal range habitat suitability | Kim Brunt 758-3951 |
| 101 | Roosevelt Elk | North Island: Nahwitti, Benson | 1 of 3? yrs | MOE, MB, WFP | Movements and habitat use | Doug Janz or Kim Brunt 578-3951 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 102 | Roosevelt Elk | Strathcona Park, Vancouver Island | 2 of 4 yrs | MOP | Habitat relationships, seasonal habitat ranges and movements | Rik Simmons 387-3931, Dave Sovka 337-5121 |
| 103 | Roosevelt Elk, Columbian Black-tailed Deer | Sayward Forest, Campbell River | 4 of 5 yrs | MOE | Effects of commercial thinning forestry activities on deer/elk habitats | Kim Brunt 758-3951 |
| 104 | Salamanders | McMillan Park | ? | UBC, MB | Habitat relationships in old growth forests | Linda Dupuis (UBC) |
| 105 | Sea Otter | Checleset Bay Ecological Reserve | 3 of 3 yrs | MOP | Ecology and oil spill impacts | Dennis Moffat 387-4355 |
| 106 | Seabirds | Coastal B.C. | 2 of 2? yrs | MOE, UVIC | Oil spill toll on seabirds and current drift patterns | Debbi Hlady 387-9658 |
| 107 | Seabirds | Coastal B.C. | Ongoing | CWS | Chlorinated and heavy metals in seabirds | Phil Whitehead or John Elliott 946-8546 |
| 108 | Seabirds | West Coast Vancouver Island | 2 of 2 yrs | CWS | Distribution and abundance offshore | Kees Vermeer 356-6537 |
| 109 | Selected Red, Blue, and Yellow Listed Species | Interior portion of province | 1 of 1 yrs | MOF | Impact of site preparation | Kat Enns 479-6216, Brian Nyberg 387-3144 |
| 110 | Sharp-tailed Grouse | Thompson-Nicola Subregion | 1 of 3 yrs | MOE, NVTC | Seasonal habitat requirements, breeding/nesting chronology, critical wintering/nesting areas | Doug Jury 374-9717, Sandra Neil 378-4235 |
| 111 | Shorebirds | Fraser estuary, Tofino mudflats | ongoing | CWS | Population dynamics, distribution, abundance | Rob Butler 946-8546 |
| 112 | Small Birds | Gulf Islands, Delta | 4 of ? | NSERC | Metapopulations of birds, conservation community biology | Jamie Smith 822-3363, M.J. Taitt 946-2438 |
| 113 | Small Mammals, Amphibians | Capilano, Seymour, Coquitlam watersheds | 1 of 2 yrs | UBC, MOF, GVWD | Relations among wood debris, small mammals, and amphibians | Vanessa Craig 822-5724 |
| 114 | Small Mammals, Birds, Furbearers | Vernon | 1 of 5 yrs | UBC | Influence of vegetation management on diversity of plants, small mammals, and birds | Tom Sullivan 822-3543, Markus Merkens 822-3543, Fred Bunnell 228-5724, Alton Harestad 291-4809 |
| 115 | Small Mammals, Birds, Reptiles, Amphibians | North Central Vancouver Island | 1 of 2 yrs | MOF, MOE, SFU | Effects of habitat island size on vertebrate communities and consequences of forest fragmentation in CWH Zone | Ken Lertzman 291-3069 |
| 116 | Snow Geese | Fraser Delta | 4 of 5 yrs | CWS | Forage and habitat use | Sean Boyd 946-8546 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 117 | Snow Geese | Fraser Delta | 5 of ongoing | CWS | Distribution, abundance, population dynamics | Rick McKelvey 946-8546 |
| 118 | Snowshoe Hare | Prince George | 4 of 4 yrs | UBC | Effects of habitat alteration on hare populations | Tom Sullivan 822-3543 |
| 119 | Song Sparrow | Gulf Islands, Delta | 18 of ongoing | NSERC | Basis research on populations, song | Jamie Smith or A. Cassidy 822-3363, D. Kapan or D. Schluter 822-3383 |
| 120 | Songbirds, Amphibians | Western Vancouver Island | 1 of 1 yrs | MB | Species diversity in old growth and regenerating forests | Andrew Bryant 754-1356, Ron MacLaughlin 755-3500 |
| 121 | Squirrel | 100 Mile House | ? of ? yrs | UBC | Territory in relation to food supply | Walter Klenner 228-4595 |
| 122 | Stone Sheep | Mount Frank Roy, west of Chetwynd | 2 of 4 yrs | MOE | Population dynamics and habitat use of transplanted sheep | Peter Davidson 787-3392, Brian Churchill 787-3286 |
| 123 | Terrestrial Invertebrates | Mount Kobau, Osoyoos | 1 of 4 yrs | RBCM | Population occurrence for South Okanagan Critical Area Program's attempts to secure protected status | David Blades or Rob Cannings 387-2419 |
| 124 | Terrestrial Salamanders | Port Alberni area | 1 of ? | UBC, MOF, MB | Effects of logging on populations, habitat | L. Dupuis 822-3363 |
| 125 | Terrestrial Salamanders | Southern Vancouver Island | 2 of ? | NSERC | Feeding, interspecies relations | K. Ovaska 727-9708 |
| 126 | Townsends Chipmunk, Deer Mouse, Oregon Vole, Red-backed Vole, other Small Mammals | Maple Ridge | 1 of 2 yrs | UBC | Study of Giardia sp. in wildlife species associated with sludge fertilization of forest plantations | Chris Cheng or Tom Sullivan 822-3543 |
| 127 | Tree Swallows | Creston | 1 of 2 yrs | SFU | Nest parasites | Wally Rendell or Nico Verbeek 291-4458 |
| 128 | Vancouver Island Marmot | Vancouver Island | 4 of ongoing | MOE, MOP | Impacts of clear cutting on population dynamics | Andrew Bryant or Doug Janz 758-3952, Bill Munro 387-9764, Denis Moffatt 387-4355 |
| 129 | Violet-green and Tree Swallows | Creston | 3 of 3 yrs | SFU | Trade-offs between defending nests and guarding mates | Barb Beasley or Nico Verbeek 291-4458 |
| 130 | Voles | Houston | 1 of 3 yrs | UBC | Development of predator-based repellent formulations for control of vole damage | Linda Boonstra or Tom Sullivan 822-3543 |
| 131 | Voles | Houston | 4 of 5 yrs | UBC | Monitor population dynamics of voles and lemmings and plantation damage control | Tom Sullivan 822-3543 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 132 | Waterfowl | Central Interior and Kootenays | 4 of ongoing | CWS | Distribution, abundance | Rick McKelvey 946-8546 |
| 133 | Waterfowl | Kawdy Plateau north-west of Dease Lake | 1 of 2 yrs | CWS, DU | Populations (species composition, density, habitat use) at high elevations of northern B.C. | Jim Hawkings (403) 668-2285 |
| 134 | Waterfowl | Northern B.C. | 3 of ? yrs | CWS | Distribution and abundance | Wendy Nixon (403) 668-2285 |
| 135 | Waterfowl | Province-wide | 3 of ongoing | CWS | Lead poisoning | Phil Whitehead 946-8546 |
| 136 | Waterfowl, Estuaries | West Coast Vancouver Island | 2 of 2 yrs | CWS | Estuary use and toxic chemicals | Kees Vermeer 356-6537 |
| 137 | Western Garter Snake | Chilcotin area | ongoing | UVIC | Population dynamics | Pat Gregory 721- 7103 |
| 138 | Western Garter Snake | Creston Valley Wildlife Management Area | 3 of 3 yrs | UVIC | Foraging strategies, population monitoring, and thermoregulation | Brent Charland or Pat Gregory 721-7103 |
| 139 | Western Garter Snake | Little Qualicum River | 2 of 2 yrs | UVIC | Foraging strategies | Kari Nelson or Pat Gregory 721-7103 |
| 140 | Western Harvest Mouse | Southern Dry Interior | 2 of 3 yrs | RBCM | Distribution and biology; status reports for Wildlife Branch and COSEWIC | David Nagorsen 387-2933 |
| 141 | Western Kingbird | Creston | 3 of 3 yrs | SFU | Nest defence | Joanne Sidevius or Nico Verbeek 291-4458 |
| 142 | Western Painted Turtle | Kikomum Provincial Park | ? of ? yrs | UVIC | | Pat Gregory or Robert St. Clair 721-7103 |
| 143 | Western Sandpiper | Lower Fraser River, Tofino, Panama | 4 of ? yrs | CWS | Distribution, abundance, population dynamics, habitat use | Rob Butler 946-8546 |
| 144 | Western Sandpiper | Sidney Island, Boundary Bay | 1 of 3 yrs | CWS | Migration ecology, population dynamics | Rob Butler 946-8546 |
| 145 | White-tailed Deer | Pend d'Oreille Valley | 13 of ongoing | MOE | Movements, seasonal habitat ranges, and population dynamics | John Gwilliam 367-9612, Guy Woods 354-6333 |
| 146 | Wolf | Adam and Eve River | 1 of 3 yrs | MOE | Population dynamics, management | Knut Atkinson 758-3951 |
| 147 | Wolf | Flathead, Wigwam, and Lodgepole drainages | 11 of ongoing | MDFWP, MOE | Predation, habitat use, population dynamics; expansion into Montana | Dan Pletcher (406) 243- 6364, Anna Wolterson 426-1450 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 148 | Woodland Caribou | East of Prince George | 1 of ? yrs | MOF, MOE, MCMF | Micro-habitat use of caribou and partial cuts | Bruce McLellan 963-9651, Susan Stevenson 564-5695, Glen Watts 565-6426 |
| 149 | Woodland Caribou | West of Williston Lake | 1 of ? yrs | MOF, MOE, BCH | Habitat use, movements, mortality rates | Bruce McLellan 963-9651, Rick Dawson 565-6856 |
| 150 | Yellow-headed Blackbird | Creston | 2 of 4 yrs | SFU | Begging behavior of nestlings | Karen Price 291-4502, Ron Ydenberg 291-4475 |

## GROUP TWO-TOPIC OR HABITAT ORIENTED

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 151 | Agriculture Lands | Fraser Valley | 2 of 2 yrs | CWS | Change in abundance | Kathleen Moore 946-8546 |
| 152 | Biodiversity | Vancouver Island | 1 of 2 yrs | MOE, MOF | Development of methods to provide a regional perspective on the status of and threats to biodiversity | Marvin Eng 378-2710 |
| 153 | Biodiversity Inventory | South Okanagan | 2 of 5 yrs | MOE | Biophysical mapping and development of species algorithms to ecologically stratify the landscape | Ted Lea 387-9781, Bill Harper 387-1158, Bob Maxwell 387-9783 |
| 154 | Biodiversity/Old Growth | Coastal B.C. | 2 of 5 yrs | MOF, CWS | Population/habitat interactions for old growth forest series | Dale Seip 660-7530, Jean-Pierre Savard 946-8546 |
| 155 | Bird Habitat | Southwest B.C. | 1 of 2 yrs | CWS, FC | Effects of herbicides on bird habitat | Rhonda Millikin 946-8546 |
| 156 | Biological Diversity | Province-wide | 1 of 2 yrs | UBC, MOF | Assessing impacts of the distribution of forestry practices through time and space on biological diversity | Fred Bunnell 822-5724, John Nelson 822-2685 |
| 157 | Bird Habitat | Woss | 1 of 1 yrs | CWS | Vegetation forage and nesting capability in various sized remnant patches resulting from forest fragmentation | Kat Enns 479-6216, Rhonda Millikin 946-8546 |
| 158 | Boundary Bay Ecosystems | Delta, Surrey | 2 of ongoing | MOE, CWS, UW | Population/habitat interactions of waterfowl, shorebirds, raptors | Rob Butler 946-8546, Dave 584-8822 |
| 159 | British Columbia Conservation Data Center | Province-wide | 1 of ongoing | MOE, NCC, NTBC, TNC | Compilation and maintenance of computerized and mapped information system for rare plants, animals, and plant communities of B.C. | Andrew Harcombe 387-9798, Syd Cannings, Georg Douglas, or Carmin Cadrin 356-0928/29 |
| 160 | East Kootenay Herpetological Survey | Leechwood/Johnson Lakes (Painted Turtles), Flathead Valley (Tailed Frogs) | 4 of 5 yrs | RBCM | Species survey, biogeography, and population status | Stan Orchard 387-2940 |
| 161 | Estuaries | East Coast Vancouver Island | 10 of ? yrs | CWS | Bird use and vegetation dynamics of estuaries | Neil Dawe 752-9611 |
| 162 | Habitat Capability | Ospika River | 1 of 2 yrs | FCC, MOE | Test GIS as tool to aid in the assessment of habitats for multiple species | Line Giguere 246-9332 |
| 163 | Lichen Studies | Columbia River, north of Revelstoke | 3 of ongoing | MOE | Lichen production in girdled young forests | Larry Ingham 354-6162 |

| No. | Species Studied | Location | Status | Agency | Purpose | Contact |
|---|---|---|---|---|---|---|
| 164 | Lichens | Coastal B.C. | 1 of 2 yrs | MOE | Status reports for five rare and endangered lichens found in old growth forests | Ted Lea 387-9781, Trevor Goward 674-2553 |
| 165 | Plants, Small Mammals, Birds, Furbearers | Province-wide | 1 of 5 yrs | UBC, MOF | Influence of vegetation management on diversity of plants, small mammals, birds, and furbearers | Fred Bunnell 822-5724, Tom Sullivan 822-3543 |
| 166 | Relatively Undisturbed Areas | Southern Okanagan Valley | 2 of 2 yrs | CWS | Ecosystem distribution, abundance, and dynamics of relatively undisturbed areas | Ken Redpath (819) 953-0981 |
| 167 | Saskatoon | Gaspard Creek area, west of Williams Lake | 3 of ongoing | MOE | Establishment trials of saskatoon on previously logged deer winter range | Andy Stewart 398-4567, Ron Kowall 387-1188 |
| 168 | Small Mammal/ Ectoparasitc Survey | Dry Interior and Coast Mountains | 3 of 3 yrs | RBCM | Distribution, population status, ectoparasites, and plague tests | David Nargorsen 387-2933 |
| 169 | Somass Estuary | Port Alberni | 1 of ? yrs | CWS | Toxic pathways and processes | Kees Vermeer 363-6537 |
| 170 | South Okanagan Herpetological Survey | Southern Okanagan Valley | 3 of 5 yrs | RBCM, MOE | Species survey, biogeography, and population status | Stan Orchard 387-2940 |
| 171 | Spatsizi System Study | Spatsizi Provincial Park | 2 of 5-10 yrs | SABR, MOE, BCH, DCF, MOP | Interactions among moose and wolves | David Hatler 846-9172, Irving Fox N423794 (Smithers channel) |
| 172 | Steel Shot | Fraser Valley, East Coast Vancouver Island | 1 of 2 yrs | CWS | Assess effects of steel shot hunting zones | Gary Dick 946-8546 |
| 173 | Waterfowl Habitat | Okanagan Valley | 1 of 1 yrs | DU, MOE | Map frequency of occurrence of purple loosestrife, a potentially habitat threatening water-borne weed | Ed Heenan 374-8307, Al Peatt 493-8261, Kat Enns 479-6216 |
| 174 | Wetlands | Lower Fraser Valley | 2 of 2 yrs | CWS | Ecosystem distribution, abundance, and dynamics | Peggy Ward 946-8546 |
| 175 | Wildlife Diversity | Vancouver Island, Lower Mainland, Queen Charlotte Islands | 3 of ongoing | MOF, CWS | Develop management recommendations tos maintain wildlife diversity in coastal forest | Dale Seip 660-7530, Jean-Pierre Savard 946-8546 |
| 176 | Wildlife Habitat | Province-wide | 1 of 1 yrs | MOF | Impact of hardwood management on wildlife | Kat Enns 479-6216, Brian Nyberg 387-3144 |
| 177 | Wildlife Habitat Handbook | Southern Interior Ecoprovince | 8 of 8 yrs | MOE, MOF, WHC | Assessing forestry impacts on vertebrate habitats using HSI models | Andrew Harcombe 387-9798 |
| 178 | Wildlife Habitat/Juvenile Spacing | Cariboo Forest Region | 3 of ? yrs | MOF | Impact of juvenile spacing on wildlife habitat | Harold Armleder 398-4407 |